TECH2O

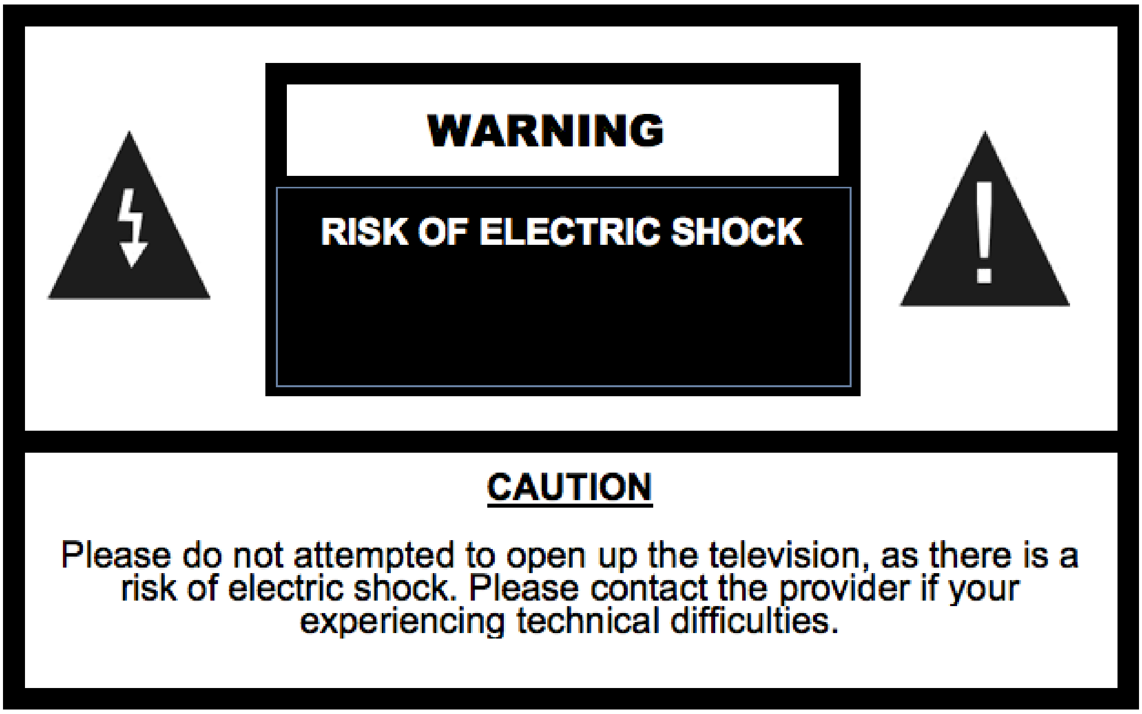
LUXURY BATHROOM TVs

15" | 19" | 22" | 27" | 32" | 42" | 46" | 55" | 65"

Instructions Manual

Table of Contents

Safety Guidelines



This Bathroom Television has been rated under IP65 Waterproof Classification. The item should not be exposed to harsh weather conditions. For safety reasons we advise that no objects are placed on top of the television unit once installed.

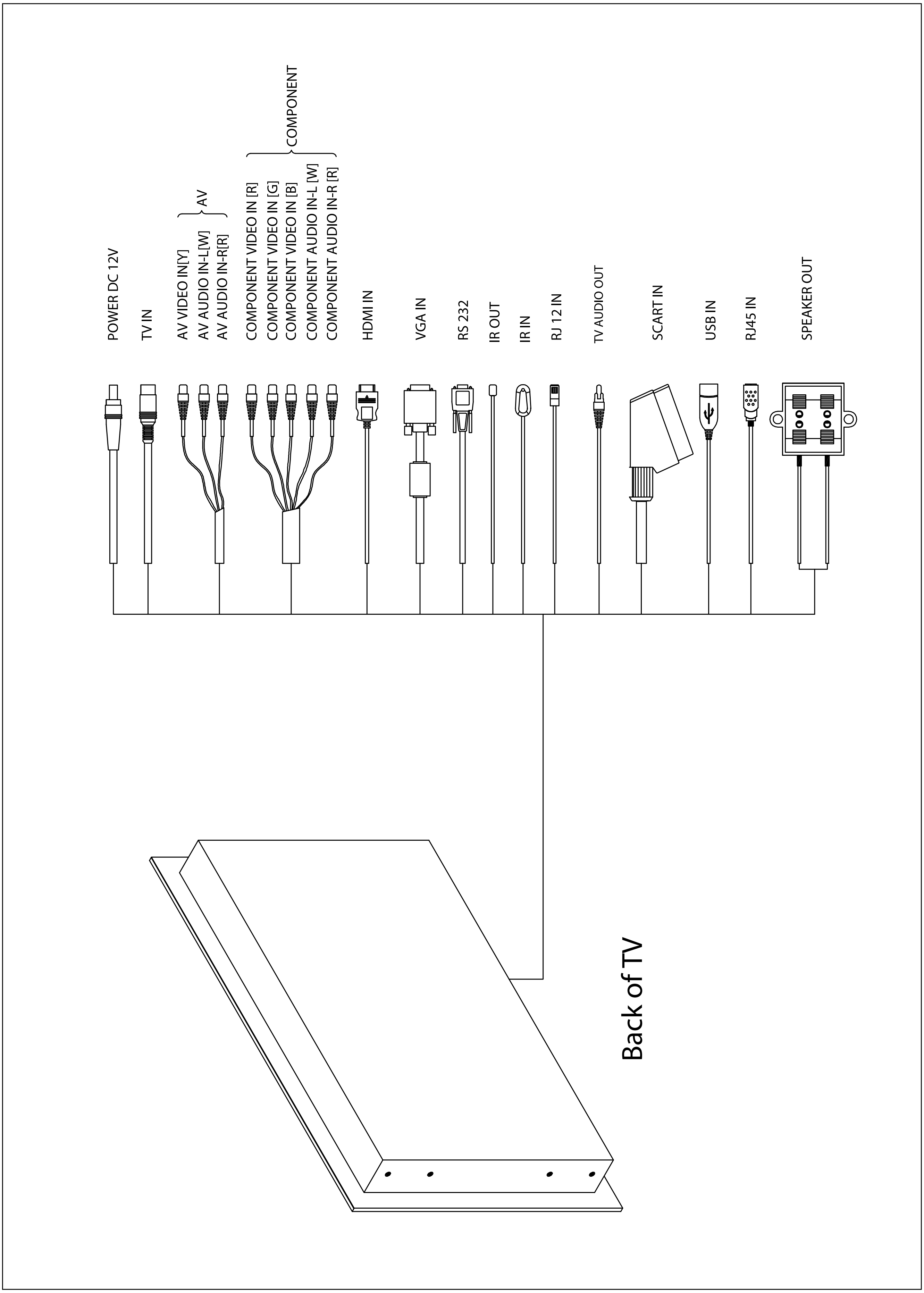
Please read the following before operating this television:

- Please do not allow children to operate this television without adult supervision or guidance.
- The television should not be subjected to temperatures below 0 Celsius or above + 50 Celsius when in use. Do not install in areas that are subjected to direct heat or light.
- Please do no carry out any maintenance or servicing on this television unless you’re a qualified technician.
- If for any reason the transformer, mains cable, remote controller or television is not performing correctly, please contact the provider.
- Please use a qualified electrician to install the power cables to your television. If the power cable is pinched or cut when installed, the users or installers could be subject to an electric shock.
- Disconnect the television in the event of (a) a power cut, (b) leaving the unit ON for a long period of time unattended, and (c) for cleaning the unit.
- Do not fully submerse the television in water.
- Do not allow the television to be subjected to acid or alkaline-based substances.
- Please install the television using the provided brackets, fixtures and fittings supplied by the provider. Follow installation instructions within this manual.
- Install the television in an area that is not subjected to vibrations or within the reach of young children.
- Do not subject the television screen to hard or sharp objects at any time.
- Do not apply harmful chemicals or corrosive liquids to the television screen.
- Please remove the protective film from the television screen and speaker panels within one week of installing.

Package Contents

Bathroom Television	2 x External Speakers and Cabling
	
Waterproof Remote Control and Holder	Power Adapter and Wired Plug
	
In-Wall Installation Bracket	Smart TV Wireless Keyboard
	

Ports and Connectors



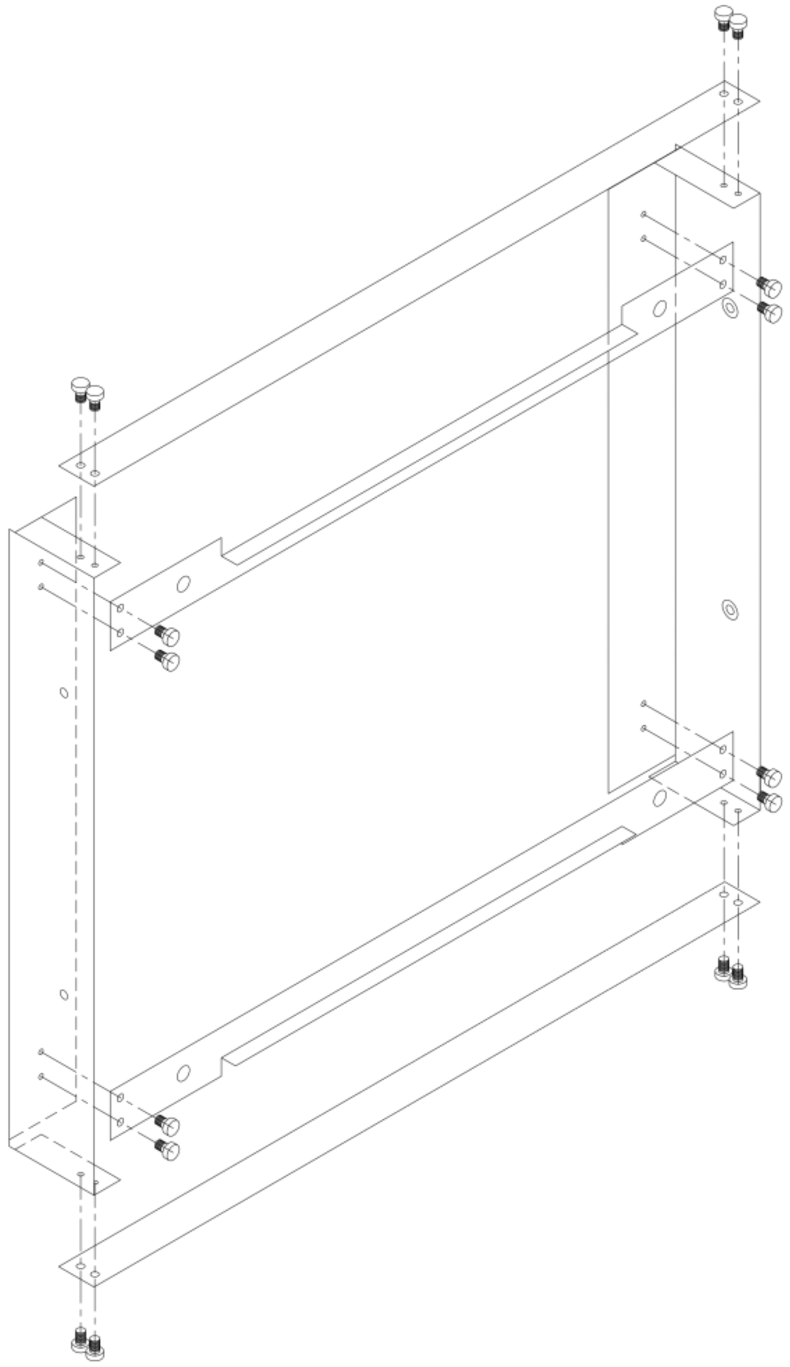
Technical Specifications

TV Size	15″	19″	22″	27″	32″	42″	46″	55″	65″
Display									
Screen Type	LED	LED	LED	LED	LED	LED	LED	LED	LED
Active Screen Size (WxH)	345.5 x 195mm	408 x 255mm	475 x 297.5mm	599 x 337mm	698 x 392mm	933 x 526mm	1019 x 573.5mm	1212 x 683mm	1430 x 805mm
Resolution	1920 x 1080 pixels	1920 x 1080 pixels	1920 x 1080 pixels	1920 x 1080 pixels	1920 x 1080 pixels	1920 x 1080 pixels	1920 x 1080 pixels	1920 x 1080 pixels	1920 x 1080 pixels
Brightness	300 cd/m2	300 cd/m2	300 cd/m2	500 cd/m2	500 cd/m2	500 cd/m2	500 cd/m2	500 cd/m2	500 cd/m2
Aspect Ratio	16:9	16:9	16:9	16:9	16:9	16:9	16:9	16:9	16:9
Contrast Ratio	400:1	1000:1	1000:1	1000:1	1500:1	1500:1	1500:1	1500:1	1500:1
Colour Depth	16.7 M	16.7 M	16.7 M	16.7 M	1.06 Billion	1.06 Billion	1.06 Billion	1.06 Billion	1.06 Billion
Viewing Angle (L/R/U/D)	89° / 89° / 89° / 89°	89° / 89° / 89° / 89°	89° / 89° / 89° / 89°	89° / 89° / 89° / 89°	89° / 89° / 89° / 89°	89° / 89° / 89° / 89°	89° / 89° / 89° / 89°	89° / 89° / 89° / 89°	89° / 89° / 89° / 89°
Response Time	6 ms	6 ms	6 ms	6 ms	6 ms	6 ms	6 ms	6 ms	6 ms
Installation									
Recess Dimensions For In-Wall Installation (WxHxD)	475 x 310 x 90mm	490 x 345 x 100mm	560 x 390 x 95mm	720 x 435 x 110mm	810 x 545 x 125mm	1105 x 705 x 110mm	1200 x 750 x 105mm	1380 x 855 x 110mm	1625 x 1000 x 110mm
Wall Bracket Compliance For On-Wall Installation	VESA 100 x 100mm	VESA 100 x 100mm	VESA 100 x 100mm	VESA 200 x 100mm	VESA 200 x 200mm	VESA 200 x 200mm	VESA 200 x 200mm	VESA 400 x 400mm	VESA 400 x 400mm
Power									
Mains Power	110-240V (DC 12V/3A adaptor)	110-240V (DC 12V/4A adaptor)	110-240V (DC 12V/4A adaptor)	110-240V (DC 24V/4A adaptor)	110-240V (DC 24V/5A adaptor)	AC 110-240v 50/60Hz	AC 110-240v 50/60Hz	AC 110-240v 50/60Hz	AC 110-240v 50/60Hz
Power Consumption	25 watts	42 watts	42 watts	50 watts	100 watts	120 watts	120 watts	175 watts	250 watts
Standby Consumption	3 watts	3 watts	3 watts	3 watts	3 watts	3 watts	3 watts	3 watts	3 watts
Dimensions and Weights									
Unit Size (WxHxD)	493 x 325 x 56mm	536 x 360 x 62mm	597.5 x 406 x 61.5mm	736 x 449 x 68mm	842 x 558 x 84mm	1122 x 720 x 86mm	1219 x 767 x 78mm	1396 x 874 x 95mm	1650 x 1025 x 87mm
Unit Weight	9 kg	12.5 kg	14.5 kg	21.5 kg	32 kg	42 kg	48 kg	70 kg	102 kg
Package Size (WxHxD)	59 x 43 x 24cm	68 x 48 x 25cm	71 x 53 x 25cm	90 x 62 x 26cm	103 x 75 x 38cm	126 x 85 x 36cm	137 x 92 x 35cm	154 x 100 x 38cm	187 x 119 x 36cm
Gross Weight	16.5 kg	20 kg	25 kg	35 kg	55 kg	68 kg	79 kg	103.5 kg	147 kg
Audio									
Speakers	2 x External Speakers								
Speaker Output	80 Watts								
Design									
Screen Finish Options	Deep Black, Reflex Silver and Magic Mirror								
Screen Material	6mm Tempered Glass								
Frame Material	Steel Construction								
Operating Environment									
Working Temperature	0°C ~ +50°C								
Working Humidity	10% ~ 90%								
System	DVB-T / T2 / C TV System, HD Freeview (Digital) TV & Radio, Analogue Tuner, MHEG 5 System, Tech2o Smart TV								
Smart TV	Processor: Dual Core 1.5 GHz, Chipset: Amlogic® AML8726-MX, Graphics: Intergrated HD Graphics, Memory: 4GB, Storage: 512MB, Operating System: Android®, Network Connections: Wi-Fi, RJ45 LAN								
Ports and Connectors	TV / Aerial Input, Component (YPbPr) Input, AV Input, SCART Input, VGA Input, HDMI Input, Sky Magic Eye IR Link, RS 232 Input, RJ 12 Input, RJ 45 Input, IR IN and OUT, SPDIF Audio Output, USB Input								
Certifications & Standards	CE, RoHS, ISO9001, ISO14001								
Waterproof Rating	IP65								
Package Contents	Bathroom TV, 2 x External Speakers, Waterproof Remote Control, Smart TV Wireless Keyboard, Power Adapter, User Manual, Installation Guide, In-Wall Installation Brackets								
Product Warranty	2 Year Warranty								

Installation Guidelines

- We advise that a professional body should install our televisions. We do not take any liability for the television being installed incorrectly and then causing damage or harm to the installer or user.
- Please do not open or tamper with the television, as this can break the television seal, which may lead to water penetrating the internal parts of the television.
- The brackets provided can easily endure the weight of the television, however please confirm the area your fixing the bracket to can hold the television bracket and television weight safely.
- Install the television on a smooth surface and in an area where people are not likely to collide with the television once installed.
- Do not plug the power cable in an area subjected to water or moisture.

Installation Instructions – In Wall Bracket Construction

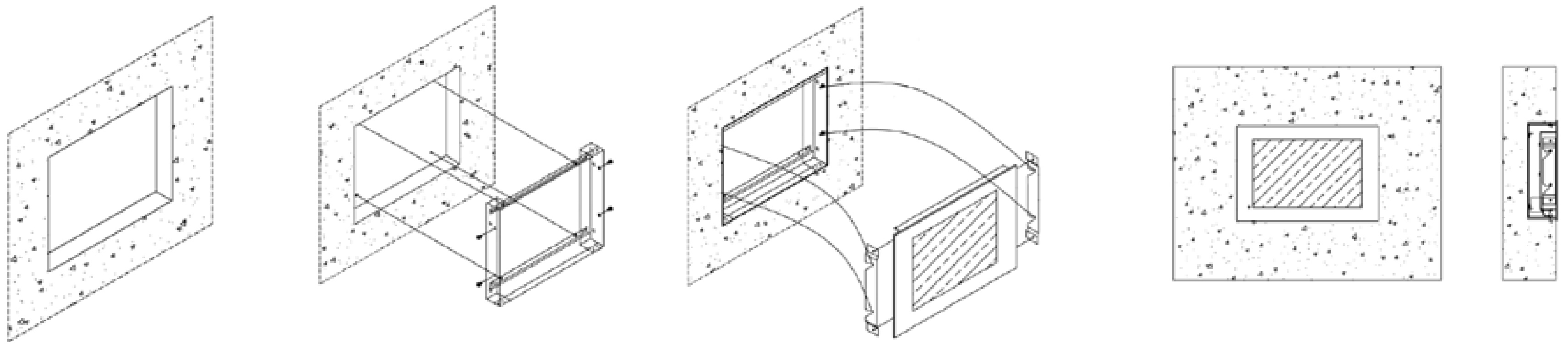


Installation Instructions - In Wall Installation Method

1. Create an opening within the chosen area of the wall. Please see the table below for specific recess dimensions that are relevant for your product.

2. Place the in-wall bracket into the recess and use the pilot holes to drill into the wall. Place the raw plugs into the holes that have been drilled and fix the bracket into position.

3. Offer the television up to the bracket that is fixed within the wall. Line up the side brackets (pre-assembled to television) with the protruding screws within the in-wall bracket and simply push the television into situ.



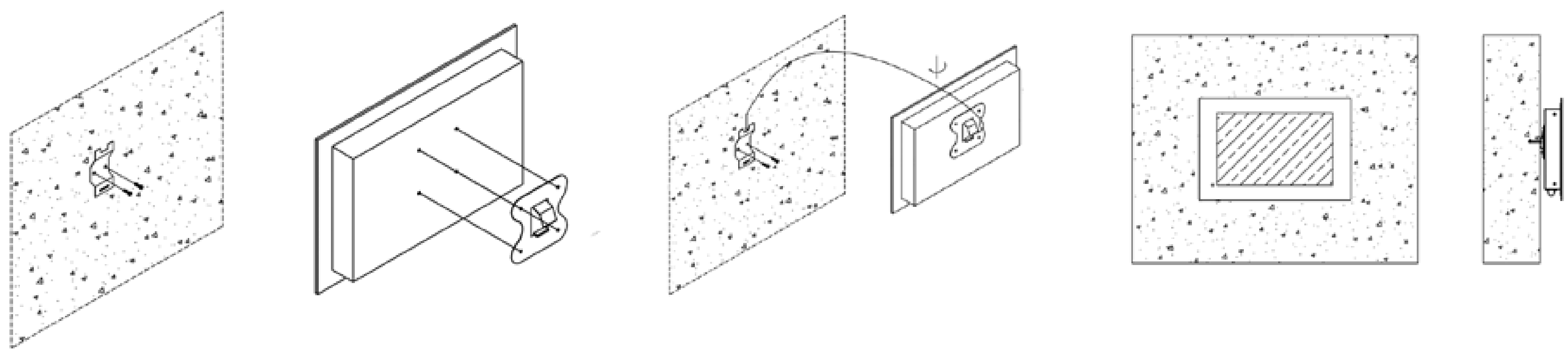
Installation Data									
Product	**15″**	**19″**	**22″**	**27″**	**32″**	**42″**	**46″**	**55″**	**65″**
Unit Size (W x H x D)	493 x 325 x 56 (mm)	536 x 360 x 62 (mm)	597.5 x 406 x 61.5 (mm)	736 x 449 x 68 (mm)	842 x 558 x 84 (mm)	1122 x 720 x 86 (mm)	1219 x 767 x 78 (mm)	1396 x 874 x 95 (mm)	1650 x 1025 x 87 (mm)
Recess Dimensions (W x H x D)	475 x 310 x 90 (mm)	490 x 345 x 100 (mm)	560 x 390 x 95 (mm)	720 x 435 x 110 (mm)	810 x 545 x 125 (mm)	1105 x 705 x 110 (mm)	1200 x 750 x 105 (mm)	1380 x 855 x 110 (mm)	1625 x 1000 x 110 (mm)

Installation Instructions - On Wall Installation Method

1. Attach the female section of the VESA bracket to the wall with the screws provided.

2. Attach the male section of the VESA bracket to the back of the television with the provided screws.

3. Simply offer the television up to the wall and slide the two pieces of the bracket into one another.



Installation Data									
Product	**15”**	**19”**	**22”**	**27”**	**32”**	**42”**	**46”**	**55”**	**65”**
Wall Bracket Compliance	VESA 100 x 100mm	VESA 100 x 100mm	VESA 100 x 100mm	VESA 200 x 100mm	VESA 200 x 200mm	VESA 200 x 200mm	VESA 200 x 200mm	VESA 400 x 400mm	VESA 400 x 400mm

Installation Instructions – Ceiling Speakers

Introduction:

Our best bathroom in-ceiling speakers for music and movies

Simplified in-ceiling installation method with snap-fit grills

Features a 14.5cm woofer and single tweeter; delivering deeper low notes for more dramatic movie sound effects and musical richness.

Experience excellent sound quality in your bathroom with TECH2O in-ceiling speaker. Our unique speakers are designed to deliver lifelike sound with more depth and impact than ever before. The speaker performance offers even distribution as well as being easy to install and flush-mountable.

Technical Specification:

Technical Specification	In-Ceiling 2 Way Speaker
Wattage:	80watts
Impedance	4 Ohms
Frequency Response	60 - 20,000 Hz
Sensitivity	90dB
Grill Diameter:	175.5mm
Speaker Depth	69mm
Cone Diameter	145mm
Ceiling Hole Size	140mm
Waterproof Rating	IP66
Colour	Artic White
Enclosure Material	UV Stabilised ABS Plastic
Grill Material	Stainless Steel
Speaker Cable Length	6 meters

Caution

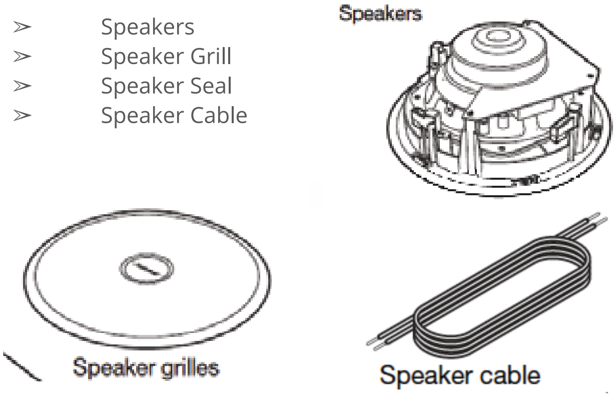
Please read this installation guide completely before you start the installation process. Please also carefully consider your experience installing such items and if you have doubts about completing this installation, you should contact either the dealer you purchased the product from, an electrician, or a professional audio/video installer.

If any part of the speaker appears damaged, do not use. Notify your supplier immediately.

Unpacking Your Items

Carefully unpack the speakers. Check to be sure the carton includes all the parts shown below:

- Speakers
- Speaker Grill
- Speaker Seal
- Speaker Cable



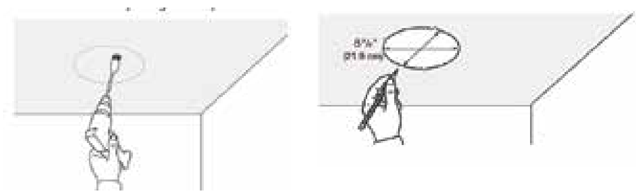
Installation Guide

Stage 1: Create a template and pilot hole

Create a template of the speaker and place on to the area where the speaker is being fitted. Draw around the template to create a guide for cutting.

Ceiling hole size: 145mm

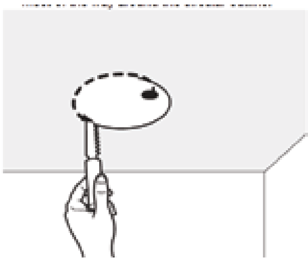
Drill a pilot hole inside the circle you have drawn. Choose a spot near the center or closer to the outside edge of the circle, depending on which will be easier when you begin to use your cutting implement.



Installation Instructions – Ceiling Speakers

Stage 2: Cutting the speaker hole

Use a single sided saw / blade to cut out the ceiling material. Insert the tip of your saw / blade into the pilot hole and cut most of the way around the circular cutting line. Place one hand under the circle to brace it and complete cutting the hole.



Stage 3: Getting the wire ready & connecting the speaker

When your speaker cable is within reach of the hole you have cut, follow the procedure below:

1. Push any insulation away from inside the speaker hole.

Be sure that all blown insulation is at least 4 to 6 inches (10 to 15cm) from the edges of the hole.

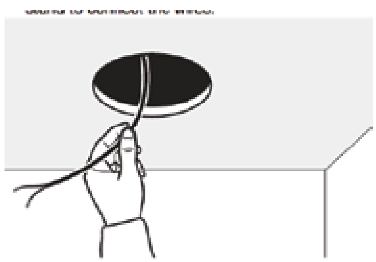
2. Locate and pull out at least 14 inches (36 cm) of your speaker cable. Allow enough cable for where you stand to connect the wires.

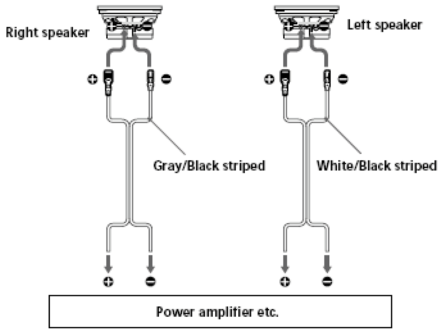
3. As you connect the wires, be careful to match the polarity of each wire to the proper terminal, as described below. An error here will adversely affect speaker performance.

> Choose the one wire on the cable end that has the larger connector (+). Simply push the connector on to the larger of the receivers on the underside of the speaker.

> Insert the other wire that has a smaller connector (-) onto the smaller receiver located on the underside of the speaker.

> Do not allow exposed wires to brush against each other. This could damage your speaker or your receiver/amplifier. Trim any excess wire and reinsert it as necessary.

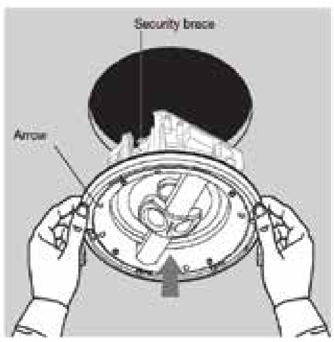


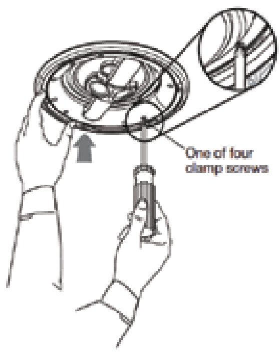


Offer the speaker up to the hole that's been created, making sure all cables are within the ceiling to avoid pinching the speaker cable.

You can use a Phillips-head screwdriver to tighten / secure the speaker firmly within the ceiling. We advise using between 6-8 medium sized screws to hold the speaker securely in place.

Tighten these screws firmly, but avoid using so much pressure that the screws compress the ceiling material. This can cause the material to crumble, creating an uneven surface with gaps between the speaker face and the ceiling.



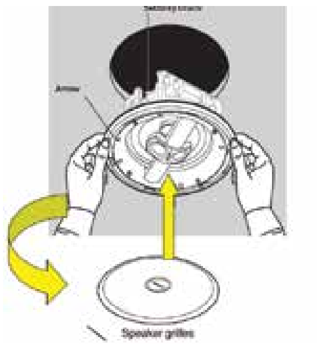


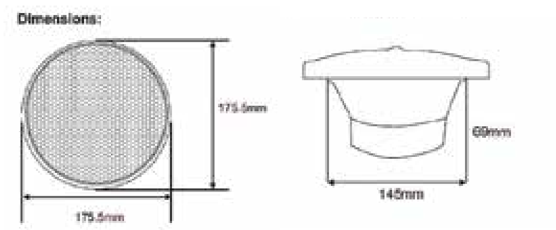
Installation Instructions – Ceiling Speakers

Stage 5: Attaching the grille

Once the speaker is securely fixed within the ceiling, offer the speaker grille up to the speaker and push in to the allotted grove that runs around the exterior of the speaker casing.

The speaker grille will simply snap in to place.





WARNINGS:

Certain forms of insulation (such as horse hair plaster, newspaper, cellulose, or any blown-in materials) may pose a risk of ignition. Be sure to keep all insulation away from speakers in accordance with the installation instructions.

- Make sure the spot chosen is safe for cutting. Do not cut through surfaces that may have hazards such as electrical wiring, conduits, or plumbing concealed behind them. Follow all other safety precautions.

- If you believe there is asbestos insulation in the ceiling where you want to install a speaker, do not drill or cut there. Find a different ceiling area for the speakers instead.

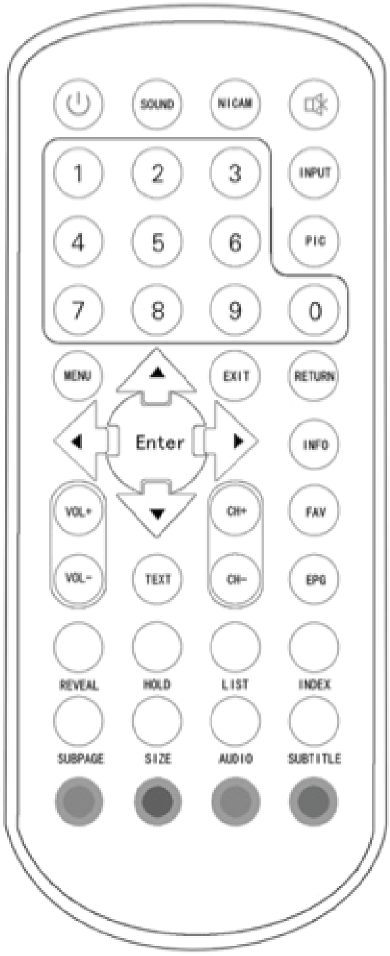
- If there is another type of moveable insulation in the ceiling, you can proceed after reading these tips:
  - You may need to cut or push the insulation away before inserting the speaker.
  - Beware of hidden nails when reaching into the ceiling to remove insulation.
  - Wear gloves and protection for your mouth, nose, and eyes before handling insulation that contains fiberglass.
  - Be sure keep a 4-6 in. (10-15 cm) area around the speaker hole free from any types of insulation to maximize acoustic performance.

Remote Control Overview

- The waterproof remote controller comes with one CR2025 3V battery ready installed.
- The remote controller doesn't need syncing to the television.
- To control the television with the remote controller, simply aim the controller at the television. If there are barriers between the remote controller and television the response may be delayed or non-existent.
- For the best remote controller connection stay within 3-metres of the television and keep the remote at a 30-degree angle. The remote controller will stay connected to the television up to a distance of 8 meters.
- The remote controller is rated IPX5 waterproof classification. Do not submerse the remote controller underwater for long periods of time.
- To change the batteries use a coin to rotate the opening on the back of the remote controller.

Remote Control Key Functions

Button	Function
POWER	ON / Stand-By
SOUND	Switch to Sound Mode
NICAM	Enter or Exit the On-Screen DTV Menu within DTV
MUTE	Sound ON / OFF - The screen will display a MUTE logo when the sound is OFF
0-9	Manual Channel Selection
INPUT	Change Source Mode
PIC	Switch to Picture Mode
MENU	Enter or Exit the On-Screen Menu
⬆ / ⬇	Up / Down selector for the On-Screen Menu
⬅ / ➡	Left / Right selector for the On-Screen Menu
ENTER	Confirm selector for the On-Screen Menu
EXIT	Exit the On-Screen Menu
RETURN	Return to Previous Channel
INFO	Display the channel name or any other information that is present on the specific signal source
VOL+	Increase the volume
VOL-	Decrease the volume
CH+	Move up a channel
CH-	Move down a channel
FAV	Display your favorite channel list
EPG	Run the electronic program guide list within DTV
TEXT	Open Teletext
REVEAL	Reveal Hidden Text in Teletext
HOLD	Hold a page in Teletext
LIST	Enter List Mode in Teletext
INDEX	Enter Index Mode in Teletext
SUBPAGE	Reveal Subpage in Teletext
SIZE	Switch aspect ratio of the displayed picture
AUDIO	Enter Audio Mode in Teletext
SUBTITLE	Language Selection
COLOURED BUTTONS	Teletext Selector



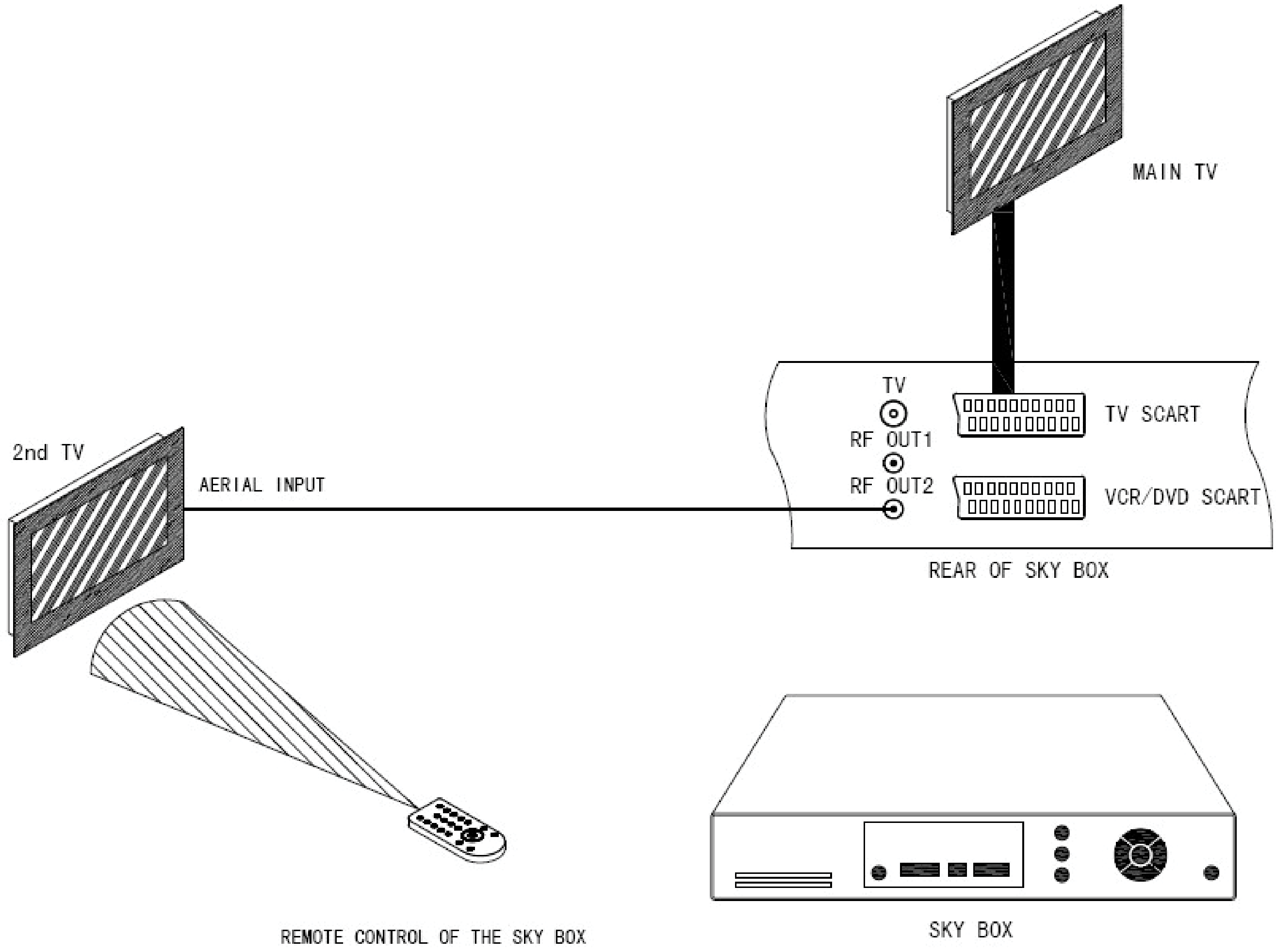
Sky Magic Eye IR Link Instructions

The built in Sky Magic Eye IR Link System allows you to control Sky Digital broadcasts on your Television... Enabling you to view Sky television programmes and control the Sky box from another location.

To setup the Sky Magic Eye IR Link System, you will need to run a length of coax cable from the socket marked RF2 output on the back of the Sky box directly to the televisions aerial input. Sky television programmes can then be viewed on the ANALOGUE part of the tuner. Your Sky box needs to be set up to faciliate for an RF2 output. Please refer to your Sky user guide on how to do this.

Control of the Sky system is available via either a standard Sky remote control or the included learning remote control. The IR receiver within the television will receive the IR signal from the remote control, send it back down the aerial cable to the Sky box allowing you to have complete control from another location.

Please refer to the diagram below for illustrative reference of how to set up your Sky Magic Eye IR Link System:

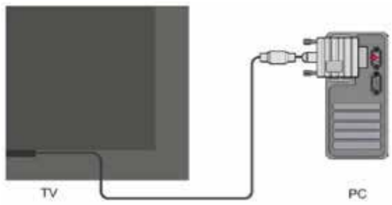


RS-232 Protocol

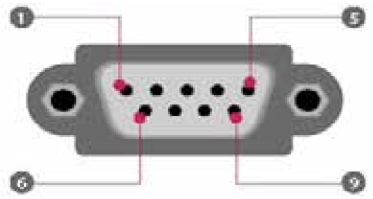
Function	IR Code	CH Code	RS-232 Code
POWER ON	2C	D4	A0F055FF2CD4
POWER OFF	2E	D2	A0F055FF2ED2
SOUND	4A	B6	A0F055FF4AB6
NICAM	14	EC	A0F055FF14EC
MUTE	08	F8	A0F055FF08F8
1	54	AC	A0F055FF54AC
2	16	EA	A0F055FF16EA
3	15	EB	A0F055FF15EB
4	50	B0	A0F055FF50B0
5	12	EE	A0F055FF12EE
6	11	EF	A0F055FF11EF
7	4C	B4	A0F055FF4CB4
8	0E	F2	A0F055FF0EF2
9	0D	F3	A0F055FF0DF3
0	0C	F4	A0F055FF0CF4
INPUT	17	E9	A0F055FF17E9
PIC	4E	B2	A0F055FF4EB2
MENU	18	E8	A0F055FF18E8
UP	1A	E6	A0F055FF1AE6
RIGHT	07	F9	A0F055FF07F9
LEFT	47	B9	A0F055FF47B9
DOWN	48	B8	A0F055FF48B8
ENTER	06	FA	A0F055FF06FA
EXIT	0A	F6	A0F055FF0AF6
RETURN	49	B7	A0F055FF49B7
INFO	5C	A4	A0F055FF5CA4
VOL+	4B	B5	A0F055FF4BB5
VOL-	4F	B1	A0F055FF4FB1
CH+	09	F7	A0F055FF09F7
CH-	05	FB	A0F055FF05FB
FAV	58	A8	A0F055FF58A8
TEXT	03	FD	A0F055FF03FD
EPG	40	C0	A0F055FF40C0
REVEAL	5E	A2	A0F055FF5EA2
LIST	52	AE	A0F055FF52AE
HOLD	5A	A6	A0F055FF5AA6
INDEX	56	AA	A0F055FF56AA
SUBPAGE	5F	A1	A0F055FF5FA1
SIZE	5B	A5	A0F055FF5BA5
AUDIO	53	AD	A0F055FF53AD
SUBTITLE	57	A9	A0F055FF57A9
RED	5D	A3	A0F055FF5DA3
GREEN	59	A7	A0F055FF59A7
YELLOW	51	AF	A0F055FF51AF
BLUE	55	AB	A0F055FF55AB
DTV	21	DF	A0F055FF21DF
ATV	26	DA	A0F055FF26DA
COMPONENT	2F	D1	A0F055FF2FD1
PC-RGB	61	9F	A0F055FF619F
HDMI1	64	9C	A0F055FF649C
HDMI2	6D	93	A0F055FF6D93
HDMI3 (Internet)	6E	92	A0F055FF6E92
SCART	6F	91	A0F055FF6F91
S-VIDEO	45	BB	A0F055FF45BB
AV1	42	BE	A0F055FF42BE

This RS-232 input connector allows the Television to receive command codes from Home Automation Systems.

Connection



RS-232 Port Pin Configuration



Pin	Function
1	Data Carrier Data
2	Receiver Data
3	Transmit Data
4	Data Terminal Ready
5	Signal Ground
6	Data Set Ready
7	Request To Send
8	Clear To Send
9	Ring Indicator

Communication Settings

Port	COM
Code	Hex form
Baud Rate	38400 bps
Data length	8 bits
Parity Bit	None
Stop Bit	1 bit

Command Code Sequence

A0 F0 55 FF <IR Code> <CH Code>

The time of the command sequence must be <500 ms.

The interval time of two continuous command sequences must be >500 ms.

IR Remote Control Codes

To program an IR Remote Control to transmit an IR Signal to operate the Television, please refer to the codes (NEC Protocol – Address 00FF) in the table below:

Function	Hex Code			
POWER ON	2	C	D	3
POWER OFF	2	E	D	1
POWER TOGGLE	1	C	E	3
SOUND	4	A	B	5
NICAM	1	4	E	B
MUTE	0	8	F	7
1	5	4	A	B
2	1	6	E	9
3	1	5	E	A
4	5	0	A	F
5	1	2	E	D
6	1	1	E	E
7	4	C	B	3
8	0	E	F	1
9	0	D	F	2
0	0	C	F	3
INPUT	1	7	E	8
PIC	4	E	B	1
MENU	1	8	E	7
UP	1	A	E	5
RIGHT	0	7	F	9
LEFT	4	7	B	8
DOWN	4	4	B	7
ENTER	0	6	F	9
EXIT	0	A	F	5
RETURN	4	9	B	6
INFO	5	C	A	3
VOL+	4	B	B	4
VOL-	4	F	B	0
CH+	0	9	F	6
CH-	0	5	F	A
FAV	5	8	A	7
TEXT	0	3	F	C
EPG	4	0	B	F
REVEAL	5	E	A	1
LIST	5	2	A	D
HOLD	5	A	A	5
INDEX	5	6	A	9
SUBPAGE	5	F	A	0
SIZE	5	B	A	4
AUDIO	5	3	A	C
SUBTITLE	5	7	A	8
RED	5	D	A	2
GREEN	5	9	A	6
YELLOW	5	1	A	E
BLUE	5	5	A	A
DTV	2	1	D	E
ATV	2	6	D	9
COMPONENT	2	F	D	0
PC-RGB	6	E	9	E
HDMI	6	4	9	B
INTERNET	6	E	9	1
SCART	6	F	9	0
S-VIDEO	4	5	B	A
AV	4	2	B	D

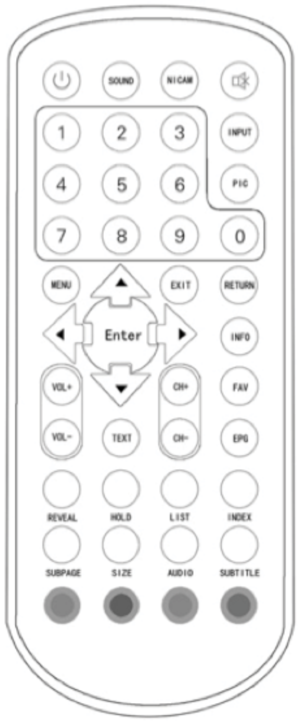
These Codes can be used to program an IR Remote Control to transmit an IR Signal to operate the Television.

Command Code Sequence

The code sequence is a DEMODU-LATED NEC protocol format. The address format is as below:

OOFF <Hex Code>

An example of the “Power ON” command code delivered to the TV via the IR Remote Control is: 00FF2CD3



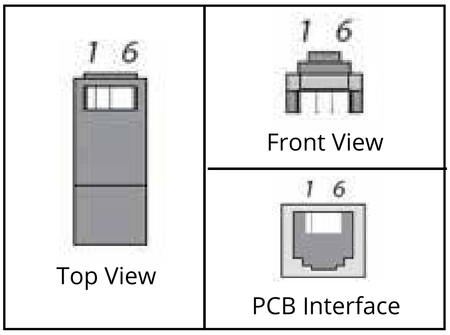
RJ12 Command Codes

Command Codes for RJ12 Connector - NEC Protocol – Address 00FF

Function	Hex Code			
POWER ON	2	C	D	3
POWER OFF	2	E	D	1
POWER TOGGLE	1	C	E	3
SOUND	4	A	B	5
NICAM	1	4	E	B
MUTE	0	8	F	7
1	5	4	A	B
2	1	6	E	9
3	1	5	E	A
4	5	0	A	F
5	1	2	E	D
6	1	1	E	E
7	4	C	B	3
8	0	E	F	1
9	0	D	F	2
0	0	C	F	3
INPUT	1	7	E	8
PIC	4	E	B	1
MENU	1	8	E	7
UP	1	A	E	5
RIGHT	0	7	F	9
LEFT	4	7	B	8
DOWN	4	4	B	7
ENTER	0	6	F	9
EXIT	0	A	F	5
RETURN	4	9	B	6
INFO	5	C	A	3
VOL+	4	B	B	4
VOL-	4	F	B	0
CH+	0	9	F	6
CH-	0	5	F	A
FAV	5	8	A	7
TEXT	0	3	F	C
EPG	4	0	B	F
REVEAL	5	E	A	1
LIST	5	2	A	D
HOLD	5	A	A	5
INDEX	5	6	A	9
SUBPAGE	5	F	A	0
SIZE	5	B	A	4
AUDIO	5	3	A	C
SUBTITLE	5	7	A	8
RED	5	D	A	2
GREEN	5	9	A	6
YELLOW	5	1	A	E
BLUE	5	5	A	A
DTV	2	1	D	E
ATV	2	6	D	9
COMPONENT	2	F	D	0
PC-RGB	6	E	9	E
HDMI	6	4	9	B
INTERNET	6	E	9	1
SCART	6	F	9	0
S-VIDEO	4	5	B	A
AV	4	2	B	D

This RJ12 input connector allows the Television to be integrated with Interactive Hotel TV Systems.

Standard Configuration



Pin	Function
1	Not Connected
2	Command code from the external equipment to TV (0V/5V nominal)
3	Not Connected
4	TV On signal from TV to the external equipment (On = 5V, Standby = 0V nominal)
5	0V – DC Ground
6	Demodulated IR Signal from the TV IR sensor to the external equipment (0V/5V nominal)

The voltage levels that are accepted as an input on pin #2 (command code from external equipment) are - High + 5V DC / Low 0V DC.

Please note that when the input on pin #2 is inactive / idle, it must be held HIGH. If held LOW then all subsequent codes will fail and the TV shall be unresponsive.

Command Code Sequence

The code sequence sent to the RJ12 connector is a DEMODULATED NEC protocol format. The address format is as below:

OOFF <Hex Code>

An example of the “Power ON” command code delivered to the TV via the RJ12 connector is: 00FF2CD3

IR Link In & Out Instructions

IR Links enable control of external equipment via the IR sensor on the Television, and control of the Television from a remote location.

IR Link IN

The IR Link IN is a 3.5mm stereo jack socket. This socket allows an auxiliary IR sensor receiver (included) to be connected to the Television to enable remote control of the Television from a different point other than the front of the Television.





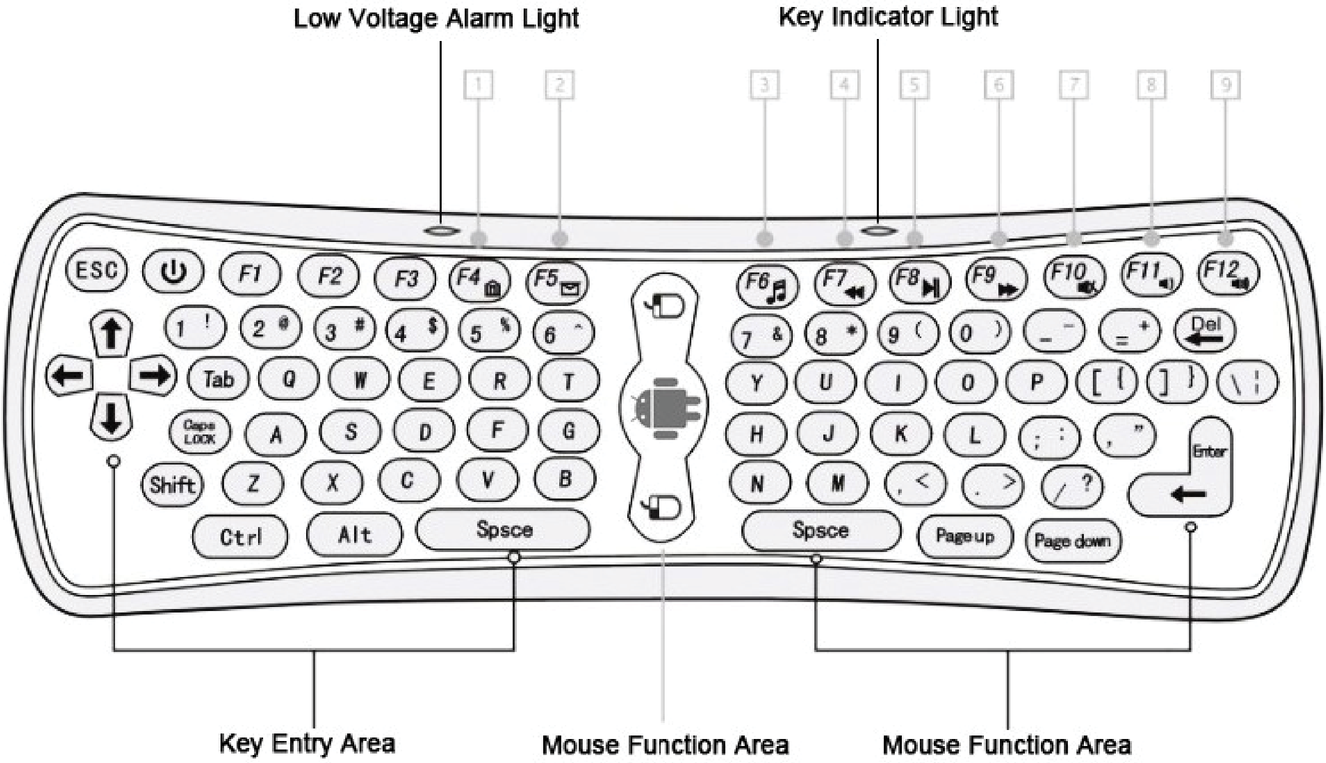
IR Link OUT



The IR Link OUT is a 3.5mm mono jack socket. The IR signal sensed by the Television is outputted from this socket to an IR emitter (included). This will enable the remote control of external equipment, such as a DVD player from the Television itself.



Smart TV Remote Control Key Functions



Button	Function
	Power ON / Stand by
[F4]	Open the system default home page within the web browser
[F5]	Open the system default email client
[F6]	Open the system default media player
[F7]	Play previous media
[F8]	Play or Pause media
[F9]	Play next media
[F10]	Sound ON / OFF - The screen will display a MUTE logo when the sound is OFF.
[F11]	Decrease the volume
[F12]	Increase the volume
Note: Other key functions are the same as those of a standard keyboard.	

Mouse Function	
	Right button of the mouse
	Cursor key. Hold down this key and the cursor will move with the movement of the remote control. Release the key and the cursor position will be locked.
	Left button of the mouse

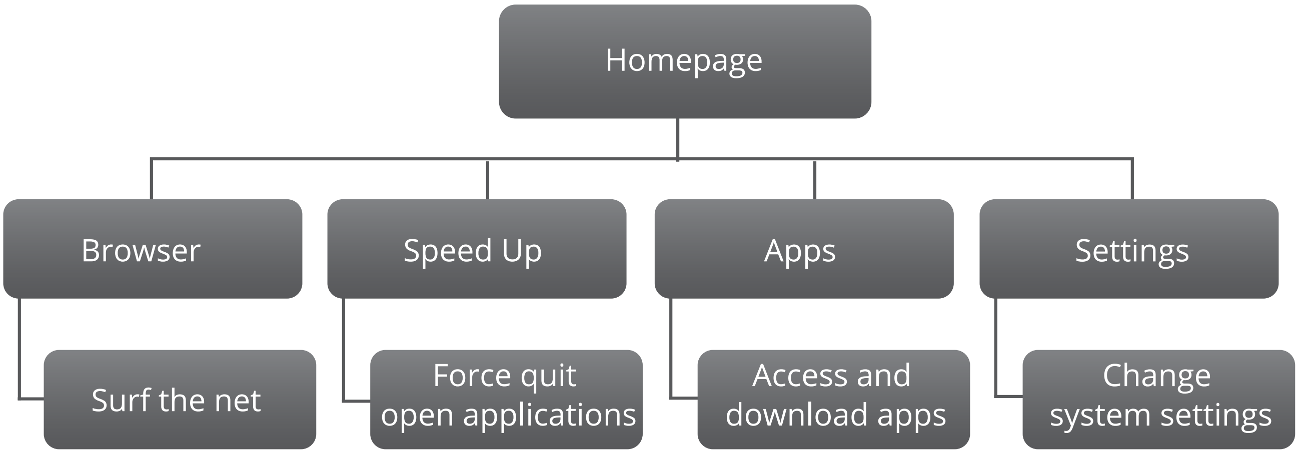
Smart TV User Guide

1.0 Specification



- Built on a Linux-based Android operating system developed by Google
- Equipped with Wi-Fi and Ethernet input for internet connectivity
- Google Play Application installed as standard allowing you to access and download a multitude of android applications
- Supports USB input and Media Player for presentation of media (picture, video and audio) in a wide range of formats
- Supports wireless keyboard and mouse
- Supports multiple languages

2.0 Homepage Interface



3.0 Network Setup Instructions

WI-FI Connectivity

a. Select “Settings” on the Smart TV homepage menu
b. Set Wi-Fi to be “ON” and the system will automatically scan for available wireless networks
c. Once the scanning process has finished, the available networks will be listed on the screen
d. Select the wireless network to connect with, and if secure, enter the relevant password

Note: when in Wi-Fi mode, the signal status indicator will be displayed in the status bar at the top of the page, which describes the current strength of signal.

LAN Connectivity

a. Select “Settings” on the Smart TV homepage menu
b. Select “Advanced Settings”
c. Set “Ethernet” to be “ON”

If your network allows for dynamic acquisition of IP address, then the system will automatically acquire the IP address for you. If your network does not allow dynamic acquisition of IP address, then you will have to select “Static IP Settings” and input the relevant information accordingly.

4.0 Apps Page Screenshot



5.0 Settings Menu



Wi-Fi: Setup and select Wi-Fi network.

HDMI: Change the screen resolution.

Screen Scale: Adjust the zoom ratio.

Network Speed: Test the network status.

Language: Change the text language.

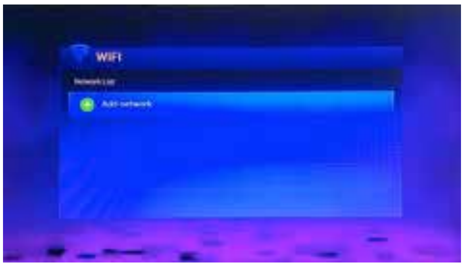
Sound Output: Select audio output.

System Upgrade: Upgrade software.

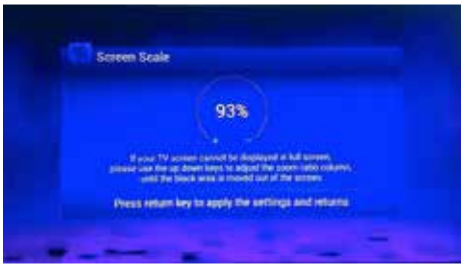
AutoRun: Select apps to auto-run on start up.

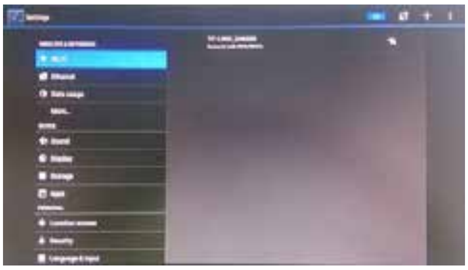
Device Info: View system information.

Advanced Settings: Change further system settings.



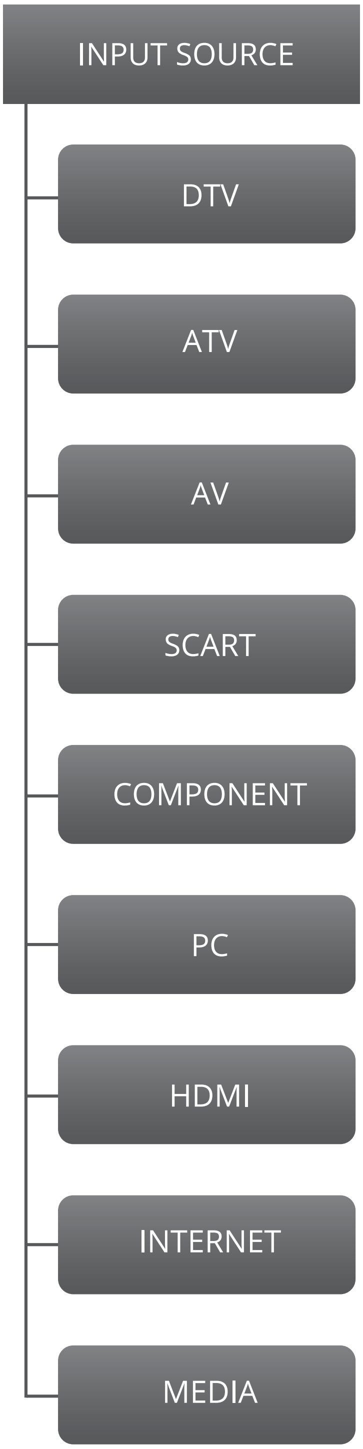




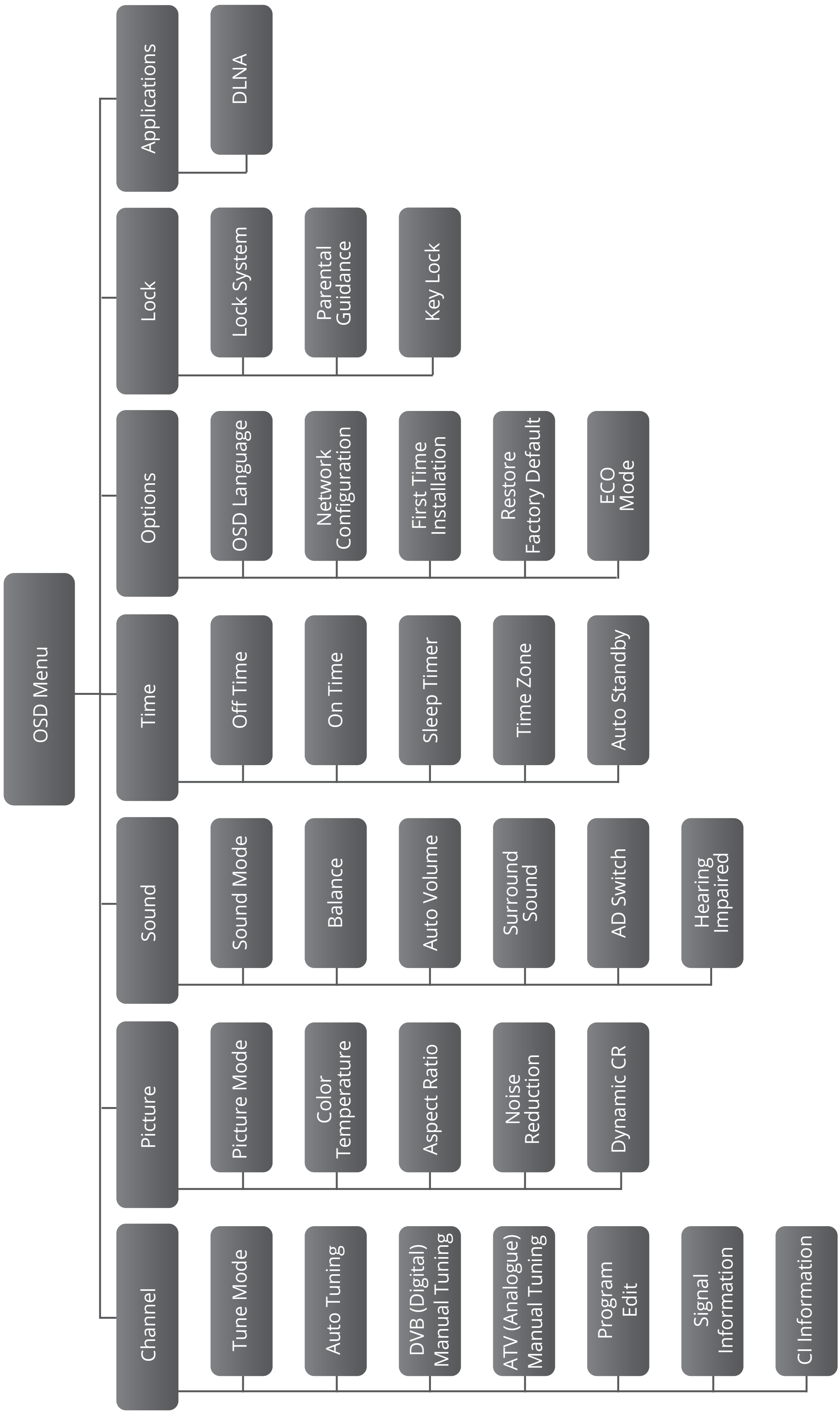


OSD Menu User Guide - 1.1 Input Source Menu

Press the INPUT button to display the input source menu.
Press ▼ / ▲ to select the input source you want to select.
Press the OK button to enter the input source.
Press the EXIT button to quit.



OSD Menu User Guide - 1.2 Main Menu Layout



OSD Menu User Guide - 1.3 Channel Menu

Press MENU button to display the main menu. Then press ◄ / ► buttons to select CHANNEL in the main menu.



Press ▲ / ▼ buttons to select the option that you want to adjust in the CHANNEL menu.
Press ENTER button to adjust.
After finishing your adjustments, press MENU button to save and return back to the previous menu.

Tune Mode
Press ▲ / ▼ buttons to select Tune Mode, then press ENTER button to enter the sub-menu.
Press ◄ / ► buttons to select tuner mode.
Tuner mode options: Antenna and Cable.

Auto Tuning
Press ▲ / ▼ buttons to select Auto Tuning, then press ENTER button to start auto tuning.

DVB (Digital) Manual Tuning
Press ▲ / ▼ buttons to select DVB Manual Tuning, then press ENTER button.
Press ◄ / ► buttons to select the channel, then press ENTER button to search for the programs.

ATV (Analogue) Manual Tuning
Press ▲ / ▼ buttons to select ATV Manual Tuning, then press ENTER button.
Press ◄ / ► buttons to select the channel, then press ENTER button to search for the programs.

Program Edit
Press ▲ / ▼ buttons to select Program Edit, then press ENTER button to enter the sub-menu.
Press ▲ / ▼ / ◄ / ► buttons to edit the programs and program order required.

Signal Information
Press ▲ / ▼ buttons to select Signal Information, then press ENTER button and you can see the information of the signal.

CI Information
Press ▲ / ▼ buttons to select CI Information, then press ENTER button and you can see the information of the common interface.

OSD Menu User Guide - 1.4 Picture Menu

Press MENU button to display the main menu. Then press ◄ / ► buttons to select PICTURE in the main menu.



Press ▲ / ▼ buttons to select the option that you want to adjust in the PICTURE menu.
Press ENTER button to adjust.
After finishing your adjustments, press MENU button to save and return back to the previous menu.

Picture Mode
Press ▲ / ▼ buttons to select Picture Mode, then press ENTER button to enter the sub-menu.
Press ◄ / ► buttons to select picture mode.
Picture mode options: Standard, Movie, User and Dynamic. Contrast, Brightness, Saturation, sharpness and Hue can be adjusted when it is under User Mode.

Color Temperature
Press ▲ / ▼ buttons to select Color Temperature, then press ENTER button to enter the sub-menu.
Color temperature options: Normal, Warm and Cool.

Aspect Ratio
Press ▲ / ▼ buttons to select Aspect Ratio, then press ENTER button to enter the sub-menu.
Aspect ratio options: Auto, 4:3, 16:9, Zoom 1 and Zoom 2.

Noise Reduction
Press ▲ / ▼ buttons to select Noise Reduction, then press ENTER button to enter the sub-menu.
Noise reduction options: Low, Middle, High and Off.

Dynamic CR
Press ▲ / ▼ buttons to select Dynamic CR, then press ENTER button.
Press ◄ / ► buttons to select On or Off.

OSD Menu User Guide - 1.5 Sound Menu

Press MENU button to display the main menu. Then press ◄ / ► buttons to select SOUND in the main menu.



Press ▲ / ▼ buttons to select the option that you want to adjust in the SOUND menu.
Press ENTER button to adjust.
After finishing your adjustments, press MENU button to save and return back to the previous menu.

Sound Mode
Press ▲ / ▼ buttons to select Sound Mode, then press ENTER button to enter the sub-menu.
Press ◄ / ► buttons to select sound mode.
Sound mode options: Standard, Music, Movie, Sports and User. 120Hz, 500Hz, 1.5KHz, 5KHz and 10Khz can be adjusted when it is under User Mode.

Balance
Press ▲ / ▼ buttons to select Balance, then press ENTER button.
Press ◄ / ► buttons to adjust the balance.

Auto Volume
Press ▲ / ▼ buttons to select Auto Volume, then press ENTER button.
Press ◄ / ► buttons to select On or Off.

Surround Sound
Press ▲ / ▼ buttons to select Surround Sound, then press ENTER button.
Press ◄ / ► buttons to select On or Off.

AD Switch
Press ▲ / ▼ buttons to select AD Switch, then press ENTER button.
Press ◄ / ► buttons to select On or Off.

Hearing Impaired
Press ▲ / ▼ buttons to select Hearing Impaired, then press ENTER button.
Press ◄ / ► buttons to select On or Off.

OSD Menu User Guide - 1.6 Time Menu

Press MENU button to display the main menu. Then press ◄ / ► buttons to select TIME in the main menu.



Press ▲ / ▼ buttons to select the option that you want to adjust in the TIME menu.
Press ENTER button to adjust.
After finishing your adjustments, press MENU button to save and return back to the previous menu.

Off Time
Press ▲ / ▼ buttons to select Off Time, then press ENTER button.
Press ◄ / ► buttons to select on or off. If on is selected, the off time can be adjusted.

On Time
Press ▲ / ▼ buttons to select On Time, then press ENTER button.
Press ◄ / ► buttons to select on or off. If on is selected, the on time can be adjusted.

Sleep Timer
Press ▲ / ▼ buttons to select Sleep Timer, then press ENTER button.
Press ◄ / ► buttons to adjust.
Sleep timer options: Off, 10Mins, 20Mins, 30Mins, 60Mins, 90mins, 120Mins, 180Mins and 240Mins.

Time Zone
Press ▲ / ▼ buttons to select Time Zone, then press ENTER button.
Press ◄ / ► / ▲ / ▼buttons to select the time zone required.

Auto Standby
Press ▲ / ▼ buttons to select Auto Standby, then press ENTER button.
Press ◄ / ► buttons to adjust. Auto Standby options: Off, 3H, 4H and 5H.

OSD Menu User Guide - 1.7 Options Menu

Press MENU button to display the main menu. Then press ◄ / ► buttons to select OPTIONS in the main menu.



Press ▲ / ▼ buttons to select the option that you want to adjust in the OPTIONS menu.
Press ENTER button to adjust.
After finishing your adjustments, press MENU button to save and return back to the previous menu.

OSD Language
Press ▲ / ▼ buttons to select OSD Language, then press ENTER button.
Press ◄ / ► buttons to select the language required.
Audio Language and Subtitle Language will be default to be the same language with the OSD Language.

Network Configuration
Press ▲ / ▼ buttons to select Network Configuration, then press ENTER button.
Network configuration: Wired Network and Wi-Fi Network.

First Time Installation
Press ▲ / ▼ buttons to select First Time Initiation, then press ENTER button to enter into a dialogue.
Press ◄ / ► buttons to select No and step into first time initiation.

Restore Factory Default
Press ▲ / ▼ buttons to select Restore Factory Default, then press ENTER button to enter into a dialogue.
Press ◄ / ► buttons to select No and step into restore factory default.

ECO Mode
Press ▲ / ▼ buttons to select ECO Mode, then press ENTER button.
ECO mode options: Low, Middle, High and Off.

OSD Menu User Guide - 1.8 Lock Menu

Press MENU button to display the main menu. Then press ◄ / ► buttons to select LOCK in the main menu.



Press ▲ / ▼ buttons to select the option that you want to adjust in the LOCK menu.
Press ENTER button to adjust.
After finishing your adjustments, press MENU button to save and return back to the previous menu.

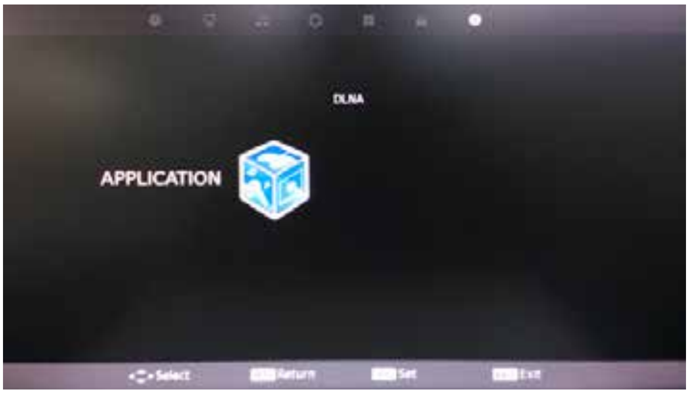
Lock System
Press ▲ / ▼ buttons to select Lock System, then press ENTER button.
Press ◄ / ► buttons to select On or Off.
If it is on, Set Password, Block Program can be adjusted. The initial password is '0000' (four zero).

Parental Guidance
Press ▲ / ▼ buttons to select Parental Guidance, then press ENTER button.
Press ◄ / ► buttons to select On or Off.

Key Lock
Press ▲ / ▼ buttons to select Key Lock, then press ENTER button.
Press ◄ / ► buttons to select On or Off.

OSD Menu User Guide - 1.9 Applications Menu

Press MENU button to display the main menu. Then press ◄ / ► buttons to select APPLICATION in the main menu.



Press ▲ / ▼ buttons to select the option that you want to adjust in the APPLICATION menu.
Press ENTER button to adjust.
After finishing your adjustments, press MENU button to save and return back to the previous menu.

DLNA
Press ▲ / ▼ buttons to select DLNA, then press ENTER button. Then the following interface will appear.
Please Note: Make sure that USB disk is plugged in and the input source is set to Media Player before operating this media menu.



Photo
Press ◄ / ► buttons to select Photo, then press ENTER.
Press ◄ / ► / ▲ / ▼ buttons to select the photo that you want to see.

Music
Press ◄ / ► buttons to select Music, then press ENTER.
Press ◄ / ► / ▲ / ▼ buttons to select the music that you want to listen to.

Movie
Press ◄ / ► buttons to select Movie, then press ENTER.
Press ◄ / ► / ▲ / ▼ buttons to select the movie that you want to watch.

Text
Press ◄ / ► buttons to select Text, then press ENTER.
Press ◄ / ► / ▲ / ▼ buttons to select the text that you want to see.

Troubleshooting

If you are experiencing problems with your television please read through all the troubleshooting points below before contacting the provider.

Problem Subjects	Possible Solutions
No Power	• Check that there is a green light on the mains power cable – transformer. If the green light isn't ON then please check the connections. • Unplug the television from the mains for 5 minutes and check all connections. Plug the television in to mains and try again.
No Television Signal	• Check whether the aerial that's connected to the television is getting a reception. • Check that the Coax cable has been plugged in to the television correctly. • Check that all other ports are working properly, including SCART, HDMI & USB.
Poor Picture Quality	• Check or adjust the following screen settings: Contrast Ratio, Colour, Tint and Brightness. • Try returning the television settings back to factory settings or running the Auto Picture Function.
No Sound	• Check that the MUTE function is not switched On. • Check that the audio inputs are connected correctly. • Increase the television volume. • Use the remote controller to reprogram the sound settings within the television's Main Menu.
Picture Shadow	• This may be down to the quality of signal being received via the aerial antenna. Please consult an aerial specialist to run checks.
No Remote Controller Response	• Change the batteries within the remote control. • The remote controller will only work within 8 meters of the television.

If you are experiencing a fault that is not listed above then please contact the provider.

Warranty Details

- All Tech2o televisions are guaranteed to be free from defects in parts and manufacture for 2 years from the date of purchase, provided that the product is used under the normal operating conditions stated within the manual.
- The warranty is only available to the original purchaser and is not transferable. Your consumer rights are not affected.
- If there are any defects with your television please contact the provider stating your invoice number, date of purchase, full name and address.
- Do not attempt to repair or take apart the television your self. If the television has been tampered with before it arrives with us, the warranty will be void.
- We advise that all customers retain original packaging should the unit need to be returned.
- If your television occurs a problem outside of the warranty period, we offer a repair service where we can collect and professionally repair your television.

Notes

Notes

Notes

TECH2O

LUXURY BATHROOM TVs

Visit www.tech2o.tv or email enquiries@tech2o.tv for more information